

## **REMARKS**

The Office Action dated January 30, 2009, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

By this Response, claims 1, 3-5, 7, 24, 26-28, and 30-31 have been amended to more particularly point out and distinctly claim the subject matter of the present invention. No new matter has been added. Support for the amendments to claims 1 and 31 may be found in the specification, for example, at page 8, lines 4-11, and Figure 4, which disclose an Inter-working Function (IWF) that can be implemented as part of any other network node, such as a Radio Network Controller (RNC). One of ordinary skill in the art would recognize that the RNC is typically equipped with a “controller” and a “transceiver.” Claims 1 and 3-31 are currently pending in the application, of which claims 1, 24, and 29-31 are independent claims.

In view of the above amendments and the following remarks, Applicant respectfully requests reconsideration and timely withdrawal of the pending rejections to the claims for the reasons discussed below.

### ***Claim Rejection - 35 U.S.C. 101***

Claim 1 was rejected under 35 U.S.C. 101 as allegedly not falling within one of the four statutory categories of invention. Applicants respectfully submit that this rejection is legally improper.

The Office Action asserted that a statutory “process” under 35 U.S.C. 101 must (1) be tied to a particular machine, or (2) transform underlying subject matter (such as an article or material) to a different state or thing (*see In re Bilski*, 88 U.S.P.Q.2d 1385 (Fed. Cir. 2008)). The Office Action then asserted that method claim 1 neither is positively tied to a particular machine nor transforms underlying subject matter, and thus, does not qualify as a statutory process.

Applicants respectfully submit that method claim 1 satisfies the “machine-or-transformation test” of *In re Bilski*, for at least the following reasons. With respect to prong (2), the limitations in method claim 1 transform the underlying subject matter to a different state or thing. Specifically, claim 1 recites, in part, “linking an inter-working function with [networks] ... configuring the inter-working function ... using the existing protocol to establish data transport bearers in [one of the networks] ... and conveying transport related information between [the networks].” These operations involve transformations of the networks of the claimed invention and/or data in the networks into different states. One of ordinary skill in the art would recognize that such networks are typically equipped with memory, such as registers, cache, RAM, and/or hard disks, which are real physical articles. The operations of claim 1 change the state of the underlying subject matter because the memory on which the data is stored must be transformed to have a different magnetic polarity, electrical charge, or the like depending on the technology that is used. These are real physical transformations. Thus, Applicants

respectfully submit that claim 1 satisfies the second prong of the “machine-or-transformation” test of *In re Bilski*.

Furthermore, the Office Action asserted that the limitations of method claim 1 are broad enough that the claim could be completely performed mentally, verbally, or without a machine. However, this interpretation is impermissible since it is inconsistent with the present specification. MPEP 2111 states, “During patent examination, the pending claims must be ‘given their broadest reasonable interpretation **consistent with the specification**’” (emphasis added). The methods discussed in the present specification are carried out by physical devices, and at no point is it discussed that a human performs, let alone is even capable of performing, the claimed features. In addition, the claims must be given their broadest reasonable construction in light of the specification as it would be understood by one of ordinary skill in the art (*see id.*). One of ordinary skill in the art would not presume that the operations of claim 1 are performed by anything other than a machine in light of the present specification. Accordingly, Applicants respectfully submit that this rejection is clearly improper, and respectfully requests that this rejection be withdrawn.

Reconsideration and allowance of claim 1 are, thus, respectfully submitted.

### ***Claim Rejections - 35 U.S.C. 103***

Claims 1, 3-28, and 31 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 7,072,329 of Willars et al. (“Willars”) in view of U.S.

Patent No. 6,374,112 of Widegren et al. (“Widegren”). The Office Action acknowledged that Willars fails to disclose or suggest all of the features of claims 1, 3-28, and 31, and cited Widegren to remedy the deficiencies of Willars with respect to these rejected claims. Applicant respectfully submits that each of claims 1, 3-28, and 31 recites subject matter that is neither disclosed nor suggested in the combination of Willars and Widegren.

Independent claim 1, upon which claims 3-23 depend, is directed to a method including linking, by a controller, an inter-working function with an asynchronous transfer mode transport network and an internet protocol transport network. The method also includes configuring, by the controller, the inter-working function to send and receive a served user transport element of an existing protocol. The method further includes using, by the controller, the existing protocol to establish data transport bearers in the asynchronous transfer mode transport network to adapt a new protocol to control the transport bearers in a transport network layer. The method additionally includes conveying, by a transceiver, transport related information between entities in the asynchronous transfer mode and the internet protocol transport networks to control the transport bearers in the transport network layer.

Independent claim 24, upon which claims 25-28 depend, is directed to an apparatus including an inter-working function linked with an asynchronous transfer mode transport network and an internet protocol transport network. The inter-working function includes a mapping entity that is configured to send and receive a served user transport

element of an existing protocol, that is used to establish data transport bearers in the asynchronous transfer mode transport network, to adapt a new protocol to control the transport bearers in a transport network layer. The mapping entity is also configured to convey transport related information between entities in the asynchronous transfer mode and internet protocol transport networks to control the transport bearers in the transport network layer.

Independent claim 31 is directed to an apparatus including a controller configured to control an inter-working function linked with an asynchronous transfer mode transport network and an internet protocol transport network. The controller is further configured to send and receive a served user transport element of an existing protocol to establish data transport bearers in the asynchronous transfer mode transport network to adapt a new protocol to control the transport bearers in a transport network layer. The apparatus also includes a transceiver configured to convey transport related information between entities in the asynchronous transfer mode and internet protocol transport networks to control the transport bearers in the transport network layer.

Applicant respectfully submits that the combination of Willars and Widegren fails to disclose or suggest all of the features of any of the presently pending claims.

Willars describes a multi-layer telecommunications system which includes an application layer and a transport layer. Differing transport technologies are interworked without terminating the application layer signaling or without involving a technology interworking in the control plane of the application layer (*e.g.*, without interworking in

the application signaling). The application layer is a radio network layer of a wireless telecommunications system. A transport layer interworking function is situated on an interface between two nodes of the radio access network (RAN). The interworking function can be located in a separate node which may be a node having both ATM and internet protocol (IP) interfaces. There are numerous modes of implementing the interworking, regardless of which interface is affected (*e.g.*, an Iur interface, an Iu interface, or an Iub interface) (*see Willars at Abstract*).

Widgren describes flexible radio access and resource allocation in a Universal Mobile Telephone System (UMTS). A UMTS Terrestrial access network (UTRAN) in response to a radio access bearer service request, allocates resources necessary to support a communication with a mobile radio. The UTRAN includes plural base stations for communicating with mobile radios over a radio/air interface using radio channel resources allocated by a radio network controller connected to the base stations. External network service nodes interfacing with external networks communicate with the UTRAN over a radio access network interface. The UTRAN provides a radio access bearer service to the external network service nodes, and radio access bearers are dynamically assigned to radio channel resources by the UTRAN. When establishing each bearer, the UTRAN maps or allocates the radio access bearer to physical transport resources through the UTRAN and radio channel resources over the radio/air interface (*see Widgren at Abstract*).

Applicant respectfully submits that the combination of Willars and Widegren fails to disclose or suggest all of the features of any of the presently pending claims. Specifically, the combination of Willars and Widegren does not disclose or suggest, at least, “configuring the inter-working function to send and receive a served user transport element of an existing protocol,” as recited in independent claims 1 and similarly recited in the other independent claims. As shown in Figure 9B, Willars refers to an IP gateway 90 that receives a connection request message 9B-3 that includes a Served User Transport (SUT) field (*see also* Willars at column 22, lines 46-54).

However, Willars fails to disclose or suggest that the IP gateway sends the SUT field. Accordingly, Willars does not disclose or suggest, at least, “configuring the inter-working function to **send** and receive a served user transport element of an existing protocol,” (emphasis added) as recited in independent claims 1 and similarly recited in the other independent claims. In contrast, Willars refers to the IP gateway that only receives the message that includes the SUT field, as discussed above, and that creates and sends an IP packet to an IP node (*see* Willars at column 22, lines 54-60). Accordingly, Willars cannot achieve the benefits of the claimed invention: “When implementing a new type of transport layer protocol, there is no need for a new [Access Link Control Application Part (ALCAP)] protocol. Instead of it the existing ALCAP ... can be used also in the new protocol, e.g. IP, side” (*see* Specification at paragraph 20).

Widegren fails to cure the deficiencies of Willars. In particular, Widegren refers to a transport connection service based on an Asynchronous Transfer Mode (ATM), but

there is no mention of the served user transport of the claimed invention. Accordingly, the combination of Willars and Widegren does not disclose or suggest, at least, “configuring the inter-working function to send and receive a served user transport element of an existing protocol,” as recited in independent claims 1 and similarly recited in the other independent claims.

Furthermore, the combination of Willars and Widegren fails to disclose or suggest, at least, “conveying transport related information between entities in the asynchronous transfer mode and the internet protocol transport networks to control the transport bearers in the transport network layer,” as recited in independent claims 1 and similarly recited in the other independent claims. The Office Action acknowledged that Willars does not disclose or suggest these features, and cited Widegren to remedy the deficiencies of Willars with respect to these features. Specifically, the Office Action asserted that Widegren discloses these features at column 8, lines 33-43 and 55-67. In the cited portion, Widegren refers to an access plane that provides a transport connection service through a network based on an ATM. The access plane also provides radio access bearers for different traffic classes (*see* Widegren at column 8, lines 55-56).

However, Widegren fails to disclose or suggest conveying transport related information between the ATM network and an IP transport network. Accordingly, Widegren does not disclose or suggest, at least, “conveying transport related information between entities in the asynchronous transfer mode **and the internet protocol transport networks** to control the transport bearers in the transport network layer,” (emphasis



added) as recited in independent claims 1 and similarly recited in the other independent claims. In contrast, Widegren refers to only the ATM network, as discussed above.

For at least the reasons discussed above, Applicants respectfully submit that the combination of Willars and Widegren fails to disclose or suggest all of the elements of independent claims 1, 24, and 31. Accordingly, Applicants respectfully request that the rejection of independent claims 1, 24, and 31 be withdrawn.

Claims 3-23 and 25-28 depend from, and further limit, independent claims 1 and 24. Thus, each of claims 3-23 and 25-28 recites subject matter that is neither disclosed nor suggested in the combination of Willars and Widegren. Accordingly, Applicants respectfully request that the rejection of claims 3-23 and 25-28 be withdrawn.

Reconsideration and allowance of claims 1, 3-28, and 31 are, therefore, respectfully submitted.

Claims 29-30 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 6,728,261 of Sasson et al. ("Sasson") in view of Willars. The Office Action acknowledged that Sasson fails to disclose or suggest all of the features of claims 29-30, and cited Willars to remedy the deficiencies of Sasson with respect to these rejected claims. Applicant respectfully submits that each of claims 29-30 recites subject matter that is neither disclosed nor suggested in the combination of Sasson and Willars.

Independent claim 29 is directed to an apparatus including controlling means for controlling an inter-working function linked with an asynchronous transfer mode

transport network and an internet protocol transport network. The apparatus also includes mapping means for sending and receiving a served user transport element of an existing protocol for establishing data transport bearers in the asynchronous transfer mode transport network to adapt a new protocol for controlling the transport bearers in a transport network layer. The apparatus further includes conveying means for conveying transport related information between entities in the asynchronous transfer mode and internet protocol transport networks for controlling the transport bearers in the transport network layer.

Independent claim 30 is directed to a computer readable medium encoded with computer executable instructions including configuring an inter-working function linked with an asynchronous transfer mode transport network and an internet protocol transport network to send and receive a served user transport element of an existing protocol. The instructions also include using the existing protocol to establish data transport bearers in the asynchronous transfer mode transport network to adapt a new protocol to control the transport bearers in a transport network layer. The instructions further include conveying transport related information between entities in the asynchronous transfer mode and internet protocol transport networks to control the transport bearers in the transport network layer.

In order for this rejection to be sustainable, the combination of Sasson and Willars must teach all the recitations of independent claims 1 and 24 because they include features that mirror those of independent claims 29-30. Accordingly, the arguments

presented above supporting the patentability of independent claims 1 and 24 over the combination of Willars and Widegren are incorporated herein to support the patentability of independent claims 29-30. Thus, it is respectfully requested that independent claims 29-30 be allowed. Sasson fails to cure the deficiencies of the combination of Willars and Widegren.

Sasson describes system and method of implementing interworking function (IWF) between ATM and IP protocols and networks. The interworking function provides mapping and encapsulation functions necessary to ensure service provided to networks/protocols is unchanged. An ATM service specific convergence sublayer (ATM-SSCS) translates between the ATM layer and RTP/UDP/IP sublayer (*see* Sasson at Abstract).

However, Sasson fails to cure the deficiencies of the combination of Willars and Widegren. Similarly to the combination of Willars and Widegren, Sasson does not disclose or suggest, at least, “configuring the inter-working function to send and receive a served user transport element of an existing protocol,” as recited in independent claims 1 and similarly recited in the other independent claims. Sasson is silent as to teaching the particular features associated with the inter-working function of independent claims 1 and 24.

Therefore, the combination of Sasson and Willars would not lead a person of ordinary skill in the art to arrive at the features of the determining as recited in independent claims 1 and 24. Consequently, Applicants submit that independent claims 1

and 24 and related independent claims 29-30 are not obvious over the combination of Sasson and Willars. Accordingly, Applicants respectfully request that the rejection of claims 29-30 be withdrawn.

Reconsideration and allowance of claims 29-30 are, thus, respectfully submitted.

### ***Conclusion***

For at least the reasons discussed above, Applicant respectfully submits that the cited references fail to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is thus respectfully requested that all of claims 1 and 3-31 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicant's undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



---

Loren H. Tung  
Registration No. 64,236

**Customer No. 32294**  
SQUIRE, SANDERS & DEMPSEY LLP  
14<sup>TH</sup> Floor  
8000 Towers Crescent Drive  
Vienna, Virginia 22182-6212  
Telephone: 703-720-7800  
Fax: 703-720-7802

LHT:skl